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—THE—

Visit of Charles Fraser

(THE COLONIAL BOTANIST OF NEW SOUTH WALES)

TO THE SWAN RIVER IN 1827, WITH HIS OPINION ON THE SUITABLENESS OF THE DISTRICT FOR A SETTLEMENT.

Together with

Copious Notes by J. G. Hay.

To which is added

The Journal of H.M.S. "Success"

(Captain James Stirling, R.N.)

ON THE ABOVE OCCASION.

V. K. JONES & CO. PRINT, PERTH.

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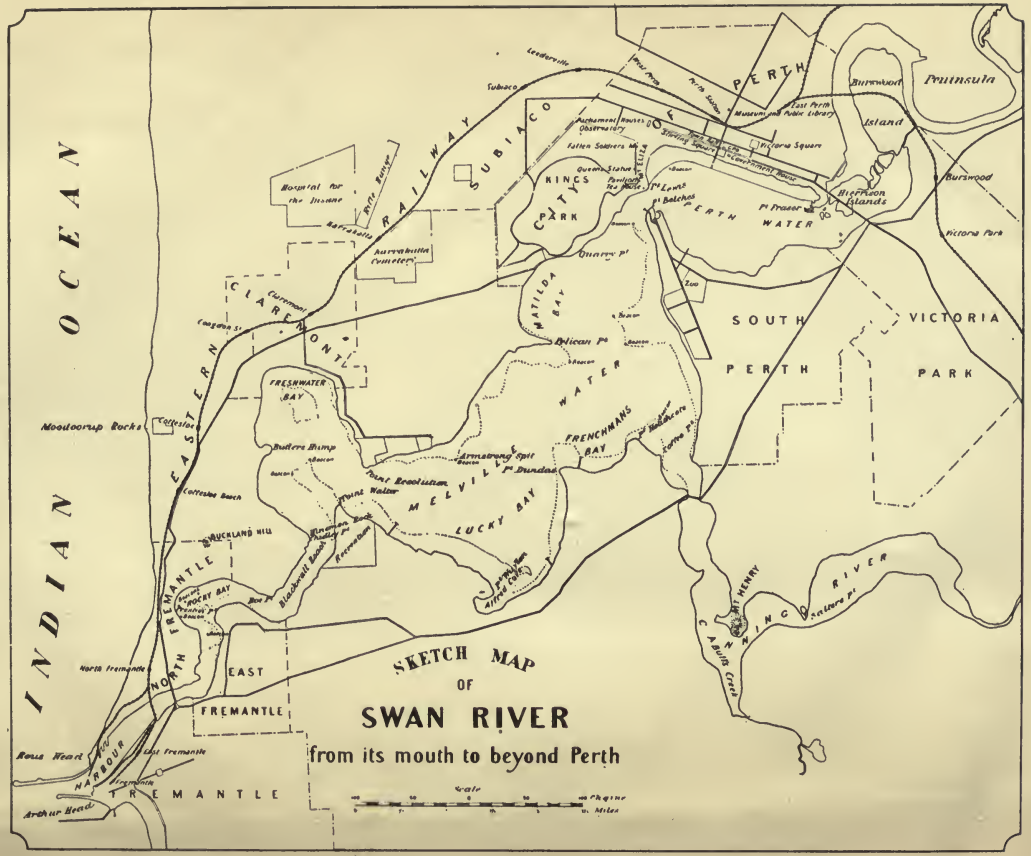
PUBLISHED BY J. G. HAY, 182 PIER STREET, PERTH, WESTERN AUSTRALIA.

1906.


SKETCH MAP
OF
SWAN RIVER
from its mouth to beyond Perth
INDIAN OCEAN
EASTERN RAILWAY
CLAREMONT
SUBIACO
CITY OF PERTH
KINGS PARK
PERTH WATER
Burswood Island
Peninsula
Burswood
Victoria Park
Hierrison Islands
Victoria Square
Museum and Public Library
East Perth
Pt Fraser
Pt Belches
Pt Lewis
Quarry Pt
MATILDA BAY
Pelican Pt
SOUTH PERTH
VICTORIA PARK
FRENCHMANS BAY
Armstrong Spit
Pt Dundas
MELVILLE WATER
LUCKY BAY
Point Resolution
Point Walter
FRESHWATER BAY
Butlers Hump
Cottesloe Beach
Cottesloe
Moodoorup Rocks
BUCKLAND HILL
Blackwall Reach
Recreation
ROCKY BAY
NORTH FREMANTLE
EAST FREMANTLE
FREMANTLE
HARBOUR
Rous Head
Arthur Head
East Fremantle
Fremantle
North Fremantle
Hospital for the Insane
Barrakalla
Barrakalla Cemetery
Claremont
Coogan St
Leederville
Subiaco
Mt HENRY
CANNING RIVER
Salters Pt
Butts Creek
Scale
Miles

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PREFACE.

The original papers, now published for the first time in Western Australia, speak for themselves,

The journal of the Clerk of H.M.S. "Success" has never before seen the light of day, and much interesting matter is pleasantly related therein.

Attention may be drawn to one or two items not hitherto known.

The original intention of the expedition was to suggest *Buckland Hill* as the site for a town for the proposed settlement. This, however, was superseded by Captain Stirling, on his arrival with the first immigrants, in the ship "Parmelia," in June, 1829, by placing the capital, Perth, about twelve miles from the port, at which he settled the town of Fremantle. The elucidation of the naming of Perth after the birthplace of Sir George Murray, the then Secretary of State for the Colonies, in honor of whom also towns in New South Wales, Tasmania, and Canada were named, and the origin of the naming of Mount Eliza after Lady Darling, should set aside many absurd stories for these nomenclatures.

Another fact that is not generally known is that *Chenopis atrata* (the black Swan of Australia), which was first observed by Vlaming, at the river he named after the bird, on the 5th of January, 1697, was not confined to that portion of Australia, but was once common to the whole southern coast from east to west, as also Tasmania and the islands of Bass' Straits. It is not a true swan, but belongs to an allied genus now, unfortunately, almost annihilated. It has been collected and brought together in numbers to the Swan River at Perth, where it is protected by legislation from being destroyed.

Finally, I have to thank the Department of Lands for facilities given me to search their records, and especially have I to thank Mr Joseph Hope, the Chief Draughtsman, for assistance freely rendered me on this and other occasions.

I have also to express my thanks to Mr. Malcolm A C. Fraser, the Registrar-General, for the loan of some of the Plates used in illustration.

One day, I trust publishing a small history of Western Australia, in the meantime, this little brochure, I hope, may not be unacceptable to some as a first instalment.

Perth, 1906. J. G. HAY.

236871

View of Perth from the Lower Terrace of the King's Park.

The Visit of Mr. *CHARLES FRASER*, Colonial Botanist of New South Wales, with Captain *STIRLING*, in H.M.S. "Success," to the Swan River in 1827, with his Report on the Botany, Soil, and Capabilities of the Locality.

(*A Paper read before the West Australian Natural History Society by Mr.* J. G. Hay, *20th March, 1906*).

The visit of the Colonial Botanist of New South Wales, with Captain Stirling, in H.M.S. "Success," to the Swan River in 1827 was pregnant with considerable importance, as it was mainly on Mr. Fraser's report that the subsequent settlement was directed.

Previously to 1826, the British practically made no claim to Western Australia, being content to allow that portion to remain under the name of New Holland.

If reference be made to Captain Phillip's instructions, it will be seen that he was directed to occupy all that portion of New Holland lying eastward of the 135th degree of longitude; and although, only a few years after, Captain Vancouver (1) took possession (on Michaelmas Day, 1791) of the land he discovered and named King George the Third Sound, yet no occupation of this territory was immediately effected.

It was only after the expedition of 1800–4, ordered by Napoleon (2), had usurped Flinders' discoveries, and named the whole southern coast "Terre Napoléon," and other French ships had visited these

(1.) Captain George Vancouver, with H.M.S. "Discovery" and "Chatham, was on a mission to the north-west coast of America, when, with a crew stricken by dysentery, he made the southern coast, at about Chatham Island. and left it at Termination Island.

(2.) Napoléon's expedition, sent out under the French Republic, consisted of the "Géographe," Commodore Baudin, and the "Naturaliste," Captain Hamelin, who was afterwards sent back to France with despatches when a second visit to Western Australia was made with the "Géographe," accompanied by a schooner bought in New South Wales, and christened by the French the "Casuarina," into which Lieutenant Freycinet was placed in command.

shores, that the British authorities, being alarmed, at last directed the occupation of King George's Sound, which was accordingly carried out on Christmas Day, 1826 (3).

Following this event, the Governor of New South Wales directed Captain Stirling to take the Colonial Botanist with him, for the purpose of reporting on the suitableness of the Swan River neighborhood for a settlement.

The "Success," leaving Sydney on January 17, 1827, was accompanied by a cutter, named the "Currency," intended to be employed in coast survey, but which, meeting with mishaps, had to return to Port Jackson.

After a preliminary visit to Hobart, the "Success" arrived off Rottnest on the 5th of March, 1827; and, three days after, the ship's gig and cutter entered the Swan River for the purpose "of examining the banks, the depth of water, to fix on an eligible spot for a settlement, to ascertain the productions of the country, the nature of the soil, and the practicability of shipping." Considering the short time occupied in all this work (not a month in the whole territory), it can scarcely be said that anything like an exhaustive examination of the country was made, and certainly not one that would justify the laudatory terms that were afterwards used to attract the settlers.

The report on which the colony was founded is not in the possession of the State, but a copy of a semi-official journal kept by Mr. Augustus H. Gilbert (clerk of the "Success") is preserved; and from a paper compiled on the botany of the Swan River, etc., by Mr. Charles Fraser, for his friend Dr. Hooker, and published in the first volume of the "Botanical Miscellany," in 1830, we learn much of the prevailing flora seen by the visitors.

Some slight mistakes were made such as calling the Red Gum (*Eucalyptus calophylla*) *Angophora;* but, taken in all, the description of a totally different series of shrubs to those common on the Eastern Coast of Australia, may be called fairly accurate. Mr. Fraser, in the course of his paper, says:—

"The soil on the South Head is a barren sand, producing a considerable variety of interesting plants, amongst which I observed

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(3.) General Darling sent Major Lockyer from Sydney, with a detachment of the 39th Regiment and a party of convicts, to King George Sound, numbering in all about 70 persons. They landed 25th December, 1826.

Anigozanthus Rufus, *Anthocercis littorea*, two species of *Metrosideros* (4); a charming species of *Prostanthera* (5), producing large quantities of rich blue flowers; a species of *Gnaphalium* (6), with procumbent stems, the white flowers of which give a snowy appearance to many parts of the cliffs; and a beautiful species of *Dryandra* (7). The appearance of the *Gnaphalium* above mentioned is in some measure confirmatory of the sandy character which the French give of these hills

"On tracing the river a quarter of a mile from its entrance, on the south bank (8), I observed quantities of a species of *Brunonia* (9), growing in great luxuriance on the margin of a salt marsh, its flowers of a brilliant sky-blue. Here I likewise gathered a magnificent species of *Melaleuca*, with scarlet flowers (10), and two species of *Metrosideros*, with various other plants, which, from their being neither in flower nor in fruit, I could not attempt to describe.

"Half a mile from the entrance, I found the soil, although apparently sterile, to consist of a fine light-brown loam, containing a small proportion of sand, and capable of producing any description of light garden crop. This character not only applies to the immediate bank as far as the reach (11) below Pelican Point (12), but likewise to the hills as far as my observation led. These hills present the appearance of a petrified forest (13), from the immense quantity of trunks which protrude for several feet above the surface;

(4.) Dr. A. Morrison, the Government Botanist, to whom I am indebted for these botanical notes, says:—"*Metrosideros*, at the time Fraser wrote, was a name applied to a great variety of myrtaceous plants, now known under the genera *Melaleuca*, *Kunzea*, *Callistemon*, *Angophora*, *Eucalyptus*, *Syncarpia*, and *Exanthostemon*. Probably he referred to paper-bark trees.

(5.) Most likely *Hemiandra pungens*.

(6.) *Calocephalus Brownii*.

(7.) *Dryandra floribunda* probably, a shrub or small tree.

(8.) The position of Phillimore-street, Fremantle.

(9.) Probably *Dampiera Linearis*.

(10.) More than one such.

(11.) Blackwall Reach.

(12.) Pelican Point. This is evidently intended for Point Walter. Fraser wrote this paper in Sydney, two years after his visit, and a number of errors principally small, occur in its pages.

(13.) The petrified appearance may be observed at several localities, notably at Cottesloe, Mount Eliza, and Arthur's Head. It is due to the shrubs and small trees being buried by drifting sand, then calcified by the lime (dissolved out of the sand by the rains) taking the place of their decaying tissues.

their decomposed state renders them of benefit rather than otherwise to the soil. Here I observed a brown snake, similar to that of Port Jackson, and it is remarkable that this was the only snake seen during the survey (14).

"At the distance of one mile from the mouth of the river (15), the genus *Eucalyptus* appears, although in a stunted state. I was much astonished at the beautiful dark-green and vigorous appearance of the trees, considering that the season had been evidently unusually dry; but the cause must arise from the great quantity of springs with which this country abounds. On penetrating two feet into the earth, I found the soil perfectly moist, and I feel confident that, had I penetrated a foot deeper, I should have found water. On the beach I observed several small pools of water and many moist spots, which, in seasons of unusual humidity, must be the seat of active springs issuing from the calcareous rocks that bound them. The luxuriance of the vegetation on the immediate beach is truly astonishing. It consists principally of syngenesious plants, and a species of *Hibiscus* with peltate leaves (16). Here I observed a beautiful pendulous *Leptospermum*, resembling in its appearance, and the situation which it prefers, the weeping willow (17). An arborescent species of *Acacia* (18) was likewise seen associated with it.

"While examining the productions of a mass of cavernous limestone rocks on the beach, I was astonished by observing an extensive spring issue from beneath them, in width about 7 feet, running at the rate of 3 feet in a second. The water was brackish, but it is evidently fresh at some periods of the tide. Its elevation is about 3 feet above low-water mark, yet at its lowest ebb its current was at the above rate. The water was found, on being analysed, to be of the same quality as that at Harrowgate (19).

(14.) Snakes. On the occasion of the French visit in June, 1801, the report states:—"Snakes are common enough on Rottnest Island. Many are not less than 4ft. to 5ft. long. with a diameter of 1½in. to 2in. Their color is greyish, but we did not observe if they were venomous." This was probably the brown snake (*Diemenia superciliosa*), the color of which varies. It may be presumed that they would also be on the mainland, as brown, black, and brown-banded are to be obtained about Perth to this day, though not so numerous as in the Eastern States.

(15.) This would be the position of the present railway bridge crossing the river at Fremantle.

(16.) *Hibiscus Huegelii*, but leaves not "peltate."

(17.) *Agonis flexuosa*. The peppermint tree.

(18.) *Acacia cyanophylla*.

(19.) This mineral spring would be about the position of the Port Brewery, near the railway bridge; but the water is not similar to Harrogate.

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"The soil on the North Head is sandy; its productions much the same as that of the south. Two hundred yards from the beach the soil changes to a light-red loam, improving, as the hills ascended, to that of a fine virgin earth (20). The valleys separating these hills along the coast are of the richest description, as far as my observations led, and inland extending to Pelican Point (21), beyond which their character was not ascertained. These hills (22) are admirably adapted for the site of a town, their elevated situation commanding a view of the whole of Canning Sound (23), with the adjacent coast, the interior for some distance, and the meanderings of the river. Their lying open to all breezes, too, is an additional advantage.

"The limestone with which these hills are studded renders them admirably adapted for the production of the vine; and, as they are free from timber and brushwood, they may at once be brought into a state of cultivation.

(20.) This very fulsome account was not borne out by Captain Fremantle R.N., who, in a despatch to the Admiralty, dated 8th October, 1829, said:—"The soil of the sea coast was generally sandy; but on arriving at the fresh water in the Swan and Canning rivers the banks were rich, and the soil capable of producing anything." Vlaming's description of the same spot, visited on the 5th January, 1697, is still more pithy. The Dutchman says:—"As regards the country it is sandy, and in the place where we were had been planted with a good many shrubs, among which were some quite three and four fathoms (vademen) thick, but bearing no fruit, in short, full of prickles and thorns. Several of these yielded gum nearly like wax, of a brownish-red color."

(21.) Now known as Crawley Point.

(22.) These hills are Buckland Hill and those in the neighborhood, but the evident intention of fixing a town there was abandoned by Captain Stirling in 1829, for the provision of two towns, as mentioned in Captain Fremantle's despatch of 8th October, 1829:—"The Lieutenant-Governor had fixed on a site for a town about 12 miles up the Swan River, on the right bank, just below the islands, where he intended removing to immediately with the whole of the party landed on Garden Island. The town is to be called Perth. There is also another town to be built, at the mouth of the river, for the convenience of the shipping in Gage Roads, near the spot where the party from the ship first established themselves" The capital, Perth, was so named after the birthplace of Sir George Murray, the Secretary of State for the Colonies, who had granted Stirling's request of giving him Garden Island, and 90,000 acres besides, for his visit to the Swan River in 1827. The seaport town was called after Captain Fremantle, R.N., of H.M.S. "Challenger," who arrived at the mouth of the Swan River on 2nd May, 1829, and hoisting the British flag on the South Head, took formal possession, in the name of His Majesty King George IV., of all that part of New Holland which is not included within the territory of New South Wales. Exactly one month after, Captain Stirling arrived with the first settlers in the hired transport "Parmelia."

(23.) Canning Sound, in 1827, gave place, in 1829, to Gage Roads and Cockburn Sound.

"The trees and shrubs seen on these hills consisted of stunted *Eucalypti* and *Leptosperma*, and a beautiful species of *Calytris*, or *Cyprus*, of the finest green color, producing large warted cones.

"On traversing the beach, I was agreeably surprised at the great degree of fragrance imparted by two graceful species of *Metrosideros*, then in flower, which exceeded anything I ever experienced. On the beach I observed a magnificent arborescent species of *Rhagodia* (25), 20 feet in height, immense quantities of *Gnaphalium*, two species of *Helichrysum* (26), and a beautiful species of an unknown plant. There were no marine productions observed upon the shore (27).

"From Pelican Point (28) to the entrance of the Moreau the country is diversified with hills of gentle elevation and with narrow valleys, magnificently clothed with trees of the richest green. Here the genus *Banksia* appears in all its grandeur, consisting of three species, of which *B. grandis* is the most conspicuous (29). The principal timber is *Eucalyptus*. The shrubs consist of a species of *Dryandra*, two species of *Hakea*, one of *Grevillea* (30), and a pendulous species of *Viminaria* (31) of considerable height, richly clothed with yellow and crimson flowers, associating itself in the most graceful manner with the weeping *Leptospermum* formerly alluded to, *Xanthorrhœa Hastilis* (32) is abundant, as is *Zamia spiralis* (33).

(24.) *Calytris. Callitris robusta.*

(25.) *Rhagodia*, 20ft. high, may have been *Rhagodia Billardieri*, common also on the south-eastern coasts.

(26.) *Helichrysum cordatum.*

(27.) The French said :—"The beach was covered with a very large number of gelatinous and transparent white molluscs, abandoned by the tide, and which are doubtless the food of the birds frequenting these shores."

(28.) Pelican Point, now known as Crawley, is opposite the entrance of the Canning River, and Fraser again, no doubt, means Point Walter, on the same side as the Canning.

(29.) *Banksias.* The three commonest are *B. grandis*, *B. Menziesii*, and *B. attenuata.*

(30.) *Dryandra*, *Hakea*, *Grevillea.* More than one species of each found in the neighborhood.

(31.) *Viminaria denudata.* Same as in the East.

(32.) *Xanthorrhœa Preissii*, not *Hastilis.*

(33.) *Zamia spiralis.* The western plant was found afterwards to be a distinct species, and was named by Miguel *Macrozamia* (or *Encephalartos*) *Fraserii*, after Fraser himself.

while *Anthocercis littorea* is seen to attain a height of 10 feet. The shores are covered with rushes of great height and thickness, concealing many beautiful syngenesious plants, but they are occasionally flooded. Here I observed the common *Casuarina* (34) of Port Jackson, though with a stunted habit. These beds of rushes are probably the rendezvous of the dugong, mentioned by Mons. Péron, but of which we saw none (35).

"On examining the shoal water of Pelican Point, I observed an aquatic stoloniferous species of *Goodenia*, with which the sandy bottom is covered.

"The soil between the above points resembles, in its surface, the sandy soil of the shores of Port Jackson more than any hitherto seen; but, on digging a few inches, it is found to contain a considerable proportion of loam. The valleys and headlands furnish an excellent soil, more particularly that of Garden Point (36). Here we planted several bananas, and seeds of all sorts of culinary vegetables. This point produces an immense quantity of herbaceous plants, amongst which I observed a pulverulent species of *Goodenia* and a species of *Centaurea*.

"The botany of Point Heathcote (37) is splendid, consisting of magnificent *Banksias* and *Dryandras*, a remarkable species of *Hakea*,

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(34.) *Casuarina*. If the same shrubby species as that common at Port Jackson, it would be *Casuarina distyla*.

(35.) On the return of the French boating expedition from exploring the Swan River, the party was for 13 hours up to the waist in slime and water, dragging the boat over the mud-flats at Heirisson's Islands, in cold and rain. The following graphic account was given by Mons. Bailly :—"In the midst of all these troubles and dangers, which had come upon us without ceasing, night descended. We were preparing to get ashore to dry ourselves and restore our spent vigor, when all of a sudden a terrible howl freezed us with terror. It resembled the bellowing of an ox, but much louder, and appeared to come out of the neighboring reeds." This occurred at what is now the foot of Plain or Bennett streets, and was not ascribed by name to any animal. May it have been the sea lion or sea bear, *Arctocephalus* (or *Otaria*) *Forsteri*, which has been known to frequent reeds for a lair? Probably the animal was as much frightened as the French.

(36.) Garden Point. This is now known as Point Lewis on the maps, and is the present termination of the Mount's Bay-road tramline. The banana groves existing in this locality are the product of the plants placed there by Fraser. A second garden was also planted, probably at the site of the present gardens, which Stirling named, after himself, Stirling Square. These take the place of botanic gardens elsewhere.

(37.) Point Heathcote is the Eastern Cape of Frenchman's Bay, about a quarter of a mile north-west of what is known now as Coffee Point.

WEST AUSTRALIAN ABORIGINES.

1. Man, Yalgoo, Age, 50; Height, 5ft. 9in. 2. Yalgoo Maid, Age, 17; Height, 5ft. 2in. 3. Kimberley Natives. 4. Man, Beagle Bay, Age, 60; Height. 5ft. 8in. 5. Man, Drysdale River, Kimberley.

two species of *Grevillea*, a species of *Leptospermum*, and a beautiful dwarf species of *Calytris*. Here we came to great abundance of fresh water on the beach, by scratching the sand with our fingers, within 2 inches of low-water mark. The beach at Garden Point is of the same character, and I doubt not but within the heads will be found of the same description. This was afterwards found to be the case. not only on the river, but on the beaches of the islands of Buâche and of Berthollet (38).

"The view from Pelican Point (39) is exceedingly grand. The contrast between the dark blue of the distant mountains and the vivid green of the surrounding forests is such as must in a peculiar manner strike the attention of a person long accustomed to the monotonous brown of the vegetation of Port Jackson. It is, indeed, materially different from anything I have yet seen in New South Wales.

"From Point Heathcote to the islands (40) the country seems to improve, as far as I could judge from the immense quantity of herbage it produced.

"Point Belches (41) on the opposite shore, the only spot on that shore examined, was found to produce *Banksias* and *Eucalyptus*. The shrubs consisted of a beautiful *Isopogon*, a species of *Acacia*, and a *Jacksonia* with crimson flowers (42), together with the general productions of the opposite shore. The soil is sandy. The cliffs (43)—of very considerable elevation—on the northern shore, are formed of fossil-limestone and sandstone. The view from this point of the meanderings of the river and the Moreau (44), with the

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(38) A garden was planted on Buâche, and Stirling, in 1829, changed its name to Garden Island. In like manner he called Berthollet "Carnac," after one of his lieutenants. The whole group was called "Isles Louis Napoleon" by the French in 1801.

(39.) Pelican Point, now known as Crawley, is a long sandspit, and the reference of Fraser more accords with Point Walter (named after Stirling's uncle, Sir Walter Stirling) than with any other. Point Walter has a fairly high ridge, commanding a good view.

(40.) Heirisson's Islands, named after the midshipman in charge of the French boating party who explored the river.

(41.) Point Belches is the extreme northern point of South Perth, or what was afterwards called Mill Point, at the Narrows. It was named after Lieut. Belches, of H.M.S. "Success."

(42.) *Jacksonia furcillata.*

(43.) Mount Eliza; so named, in 1827, by Stirling, after Lady Darling, the wife of the Governor of New South Wales.

(44.) The French did not explore the Canning River, but named its entrance "Entrée Moreau." They at first set it down as being another communication with the sea. Stirling, in 1829, named the tributary river after Canning, the PrimeMinister of England.

surrounding country and distant mountains, is particularly grand (45). This seems to be the extreme easterly boundary of the limestone (46).

"The islands (47) on the flats are composed of a rich deposit carried down by the floods. Their margins are covered with *Metrosideros* and *Casuarina* (48), and their interior with seaside succulent plants. On one side of these islands I caught sight of a plant with an arborescent habit, which, on examination, proved to be a species of *Zamia* with spiral fruit, differing only from *Z. spiralis* in habit. Here the equatorial *Goodenia*, formerly alluded to, disappears. The difficully (49) which the party now experienced from having mistaken the channel, and in having, consequently, to drag the boats over the mud, were great, but by perseverance were overcome. From the extensive beds of oyster shells (50) which lie a foot deep in the soft mud, our feet became dreadfully lacerated. These flats are extensive, but by employing flat-bottomed boats they may be easily crossed (51).

"At Point Fraser (52) the bank may be said to terminate, and the channel appears to be that of a beautiful inland river. From the entrance to this spot it may more properly be called an estuary. The flats, or levels, at this spot are very fertile, composed of a rich alluvial deposit, but evidently occasionally flooded, drift timber having been seen 5 feet above the surface. Here are extensive salt-marshes,

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(45.) The view from the King's Park, on Mount Eliza, is the finest of its kind in all Australia. In no other city is there such a combination of city, suburb, and river, backed by a mountain range. It certainly is a view that no visitor should miss.

(46.) This has since been found not correct.

(47.) These islands (Heirisson's) it is intended one day to convert into recreation gardens. One of them has already been chosen by some of the black swans for a nesting ground. These swans were obtained from other localities under Sir John Forrest's administration, and after a little nursing at the Mill Pond, South Perth, were liberated on the river. They are now again thoroughly at home on the river named after them, by Vlaming, on the 5th of January, 1697.

(48.) *Casuarina glauca.*

(49.) The French, with one boat, had a greater difficulty; whereas the English party had two boats, and consequently a greater number of hands.

(50.) These shells make excellent footpaths in Perth.

(51.) A canal was cut through the isthmus of Burswood Island in 1830, and a dam constructed to divert the water in such a manner as to keep open a channel. This canal has long since been allowed to close up, and barges and boats have to make the circuitous course round the three sides of this so-called island. Another canal, some years ago, was cut through the mud-flats, and is still used.

(52.) Point Fraser (named after the Colonial Botanist of New South Wales) is the south-eastern extremity of the City of Perth. The Swan River here takes a northerly sweep.

admirably adapted to the growth of cotton (53). This has already been produced at Sydney, and pronounced by the ablest judges in Britain to be of very superior quality. There can be no question but that, both as to soil and climate, the banks of the Swan River would prove better adapted to the cultivation of this plant than Port Jackson, and the seed that should be tried is that of Sea Island Cotton.

"The hills on the bank of the river are exceedingly barren, resembling those of Port Jackson, but producing a magnificent species of *Angophora* (54), which seems to assume the same situation in the botany as the genus *Eucalyptus* does in that of Port Jackson. *Banksia grandis* was here seen to attain the height of fifty feet, and its trunk frequently exceeded two feet and a half in diameter.

"Amongst the new botany of this tract may be enumerated a species of *Metrosideros* of great elegance, forming thickets on the flats, and intermingling with two other species of the same genus, but of less beauty; its flowers of the most brilliant scarlet (55); the general height of the tree, 6 feet. There were also a pink-flowered handsome species of *Centaurea*, a remarkable dwarf species of *Hakea*, two species of *Daviesia* and *Dryanda Armata*.

"I observed a species of *Psittacus* (56), in large flocks, whose

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(53.) The cultivation of cotton at the close of the eighteenth century was enthusiastically taken up by one Baron De La Clampe, a retired French officer of the ancient *regime*, who after serving in India against the English, and being taken prisoner, desired to emigrate to New South Wales rather than join the army of the French Revolutionists. Mons. De La Clampe's plantation at Castle Hill, in New South Wales, was visited by Mons. Péron in 1802, and fine specimens, similar to Nanking cotton were then inspected.

(54.) *Eucalyptus calophylla*, the red gum of Western Australia. An excusable mistake by Fraser, as a strong resemblance exists to the apple-tree gums of New South Wales.

(55.) *Metrosideros*, with flowers of a brilliant scarlet, would be probably either *Melaleuca lateritea* or *Beaufortia squarrosa*.

(56.) *Psittacus*. Mr. A. W. Milligan, the Western Australian ornithologist, says:—"The ground-feeding cockatoo I take to be *Cacatua Leadbeateri*, or Leadbeater's cockatoo. It is possible, however, that it may be *Licmctis nasica* (commonly known as the corella), which also feeds upon and digs into the ground." On referring to Gould, that celebrated ornithologist says:—"*Cacatua Leadbeateri*. The pink cockatoo of the colonists of Swan River. This beautiful species of cockatoo enjoys a wide range over the southern portions of the Australian continent. It never approaches very near the sea, but evinces a decided preference to the interior of the country. It annually visits the Toodyay district of Western Australia, and breeds at Gawler, in South Australia." Of *Licmetis* he says:—"*Licmetis nascius*. The habitat of the present species would appear to be confined to Victoria and South Australia, where it inhabits the interior rather than the neighborhood of the coast. Like the *Cacatua galerita* (great sulphur-crested cockatoo), it assembles in large flocks, and spends much of its time on the ground, where it grubs up the roots of orchids and other bulbous plants, upon which it mainly subsists, and hence the necessity for its singularly-formed bill." And of the other species he says:—"*Licmetis pastinator*. Western long-billed cockatoo. All ornithologists now admit that there are two species of the genus *Licmetis*, one inhabiting the western and the other the eastern portions of Australia."

voice is more plaintive than that of the white cockatoo. It feeds on the roots of orchideous plants, to obtain which it scratches the ground to a considerable depth.

"While attending to a boat in the river, which the party was dragging over the mud, I distinctly heard the bellowing of some huge animal, similar to that of an ox, proceeding from an extensive marsh further up the river (57). (Could this be the dugong of the French?)

"Immediately afterwards, I was visited by three natives, armed; they made signs for me to depart, but offered no violence. On hearing the voices of the party they retired in the woods.

"One mile up the river from the last point is a small creek (58) of fresh water, issuing from an extensive lagoon clothed with arborescent species of *Metrosideros* of great beauty. The banks are covered with the most interesting plants, amongst which I observed two species of *Calytris*, a species of *Acacia* (59) with a scolopendrous stem, and several *Papilionaceous* plants. The *Angophoras* on the flats are gigantic. These flats are formed of tolerable loam, of great depth, and capable of producing fair crops.

"The *Zamia* seen from the islands was here observed to attain the height of 30 feet. *Xanthorrhœa arborea*, too, was of equal size, and, associated with the splendid *Banksias*, imparted to the forest a character perfectly tropical.

"I was astonished at observing the facility with which water was obtained in this apparently sterile tract, for on digging to a depth of 3 feet it was found in abundance, and of the best quality.

"Proceeding up the river from the above-mentioned creek, the country assumes a distinct appearance from that seen below. On the left is an extensive marsh (60), bordered by thickets of *Casuarina*, surrounded by a flat of the richest description, rivalling in point of soil that of the Hawkesbury. Here I first observed the *Brome*, or kangaroo-grass of New South Wales, in great luxuriance (with the exception of some seen on the banks at Point Fraser). Bastard and blue gum (61) is seen here in considerable quantities and of great size. The opposite bank is high, and covered with *Eucalyptus* and *Banksia*. The soil is a light sandy loam.

(57.) This would not be very far from the lair of the animal that so startled Mons. Heirisson's party in 1801.

(58.) Claise Brook. Now the main sewer of Perth, the site of the septic-tank treatment of sewage.

(59.) *Acacia diptera*.

(60.) Walter's Brook, named by Stirling after his uncle. This is now the city boundary, dividing Perth from Maylands.

61.) May refer to the flooded gums of this State.

"From the above point the country resembles in its features that which borders all the rivers of New South Wales the course of which is west of the Blue Mountains, varying alternately on each bank into hilly points and extensive flats. The hills are covered with magnificent *Angophoras*, *Zamias*, and *Xanthorrhœa*. The soil is a rich red loam of very great depth, throwing up a luxuriant herbage, amongst which I observed *Anigozanthus rufus*, *Clematis aristata*, and a beautiful species of *Borya (?)* The flats, which are composed of the richest brown loam, equal to any on the east, are thinly studded with gigantic blue gums, and occasional stripes of suffrutescent *Acacias* and papilionaceous shrubs, occupying in this country the same situation in the geography of its botany as the green wattle in New South Wales. *Banksia* and *Zamia* are still seen on the high lands.

"It is worthy of remark that, in New South Wales, the presence of *Banksia*, *Zamia*, *and Xanthorrhœa* are considered sure criterions of a bad soil; and, such being the impression on my mind, I pronounced all the land on which they were seen to grow to be sterile, until I examined a ridge on the banks, producing them in great luxuriance, when, to my astonishment, I found the soil to be a red earth of great depth, producing the most luxuriant *Brome* grass.

"In proportion, as we ascend the river, the flats increase in breadth and luxuriance, each being backed by a terrace of forest land of the finest description, extending for miles from the river, and resembling in character those seen on the banks of the Macquarie River, west of Wellington Valley. On further observation, towards the source of the river, these flats were seen to extend to the base of the mountains, interspersed with stripes of good forest land, on which I observed a considerable portion of stringy bark (62). The variety of plants seen on this tract was great; amongst the new ones I observed I may enumerate seven species of *Hakea*, a species of *Lambertia* (63), four species of *Isopogon*, three species of *Leptospermum*, a species of *Petrophila*, and a liliaceous plant not seen in flower. *Banksia grandis* was remarked in a stunted state.

"The base of the mountains (which was named Darling's Range, in honor of General Darling) is covered with fragments of quartz and chalcedony. The soil is a red sandy loam. Here I observed a species of *Hakea* with holly-shaped leaves (64). Further up the soil improves to a light-brown loam, but, from its rocky nature,

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(62.) No stringy bark exists, but this would refer to the jarrah (*Eucalyptus marginata*).

(63.) *Lambertia multiflora*, with yellow flowers.

(64.) *Hakea* with holly-shaped leaves would be either *H. glabella*, *cristata*, or *amplexicaulis*.

WEST AUSTRALIAN ABORIGINES.

1. Fitzroy River Native, Age, 25; Height, 5ft. 9in. 2. Broome Woman in Mourning (hair dressed with clay, wilgie and fat). 3. Kimberley Natives. 4. Man, Broome, Age, 25; Height, 5ft. 9½in.

is incapable of cultivation. I saw a beautiful species of *Dryandra*, and a species of *Hakea* and several syngenesious plants. The summit of the mountain is studded with noble *Angophoras*. Here, too, I found a beautiful species of *Arthropodium* (65) with filiform leaves, an arborescent species of *Hakea* (66), a species of *Dryandra*, and two species of *Isopogon*. The view from this summit is extensive, resembling that seen from Princess Charlotte's Valley, which I witnessed in 1817 (67)—*vide* Oxley's Journal—but divested of the permanent swamps. The highest part of the range is of ironstone, but it is remarkable that there is no underwood. The ranges are of equal height, so that no view could be had to the eastward.

"At the source of the river I observed thickets of an arborescent species of *Acacia*, and gigantic thistles (67) 11 feet in height. Here I found a magnificent species of *Hibiscus* (69) with brilliant sky-blue flowers, and a species of *Euphorbia* (70). The ridges on the banks are perforated with immense numbers of deep pits, the origin or cause of which we could not at first ascertain. They proved to be made by the natives for the purpose of catching land tortoises, with which these ridges abound.

"We found the river to be navigable until it almost ceases to be a stream, or where there is not room for a boat to pass (71). The water is fresh 16 miles below its navigable source, and that at the end of a very dry season; what, therefore, must it be in the wet season? (72). Mons. Freycinet (73) states that he found no fresh water, although he was in the country during the rains, a decisive proof that we must have penetrated at least 25 miles higher than he did. We saw nothing of the lake (74) laid down by him, and judge it to be a

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(65.) *Arthropodium Preissii.*

(66.) *Hakea glabella.*

(67.) Fraser was formerly a private soldier in the army, and Oxley alludes to him as "Fraser, our soldier-botanist."

(68.) These thistles must have been introduced, probably by the French in their exploration of the Swan.

(69.) May be *Hibiscus hakeaefolius.*

(70.) *Euphorbia.* May refer to *Phyllanthus calcinus*, which is quite a common *Euphorbiaceous* plant.

(71.) The furthest portion of the Swan shown on Stirling's map is its junction with Ellen's Brook (named after his wife). The river now is navigable beyond this.

72. This is extraordinary, as that part of the river shown by Stirling as "river-water fresh here" would scarcely be as far as the present site of Guildford, where it is only fresh with the winter rains.

(73.) There is no mention in Péron's Journal of Mons. Freycinet (who was a lieutenant) being in Midshipman Heirisson's boat.

(74) The French, on their map, showed a "pond" of fresh water on the west side of the river, close to its bank, at the termination of their survey. This would be about the site of Guildford.

swamp. The supply of water from underground springs into the river must be immense, for it is impossible that the springs at the source could furnish such a quantity of fresh water (75). The tide at the entrance of the Swan River was not observed to rise above 2 feet, even at spring tides and at the source it was hardly observable.

"The climate during our stay was the most delightful I ever experienced, the thermometer seldom ranging above 85 deg.; the nights agreeably cool. The sea-breezes set in at two hours after sunrise, and cease at sunset, when they are immediately succeeded by the land-breeze, which, even in February (76), is so agreeable that, while surveying the river, we preferred sleeping in the open air to lodging in tents.

"The quantity of black swans (77), pelicans, ducks, and aquatic birds seen on the river was truly astonishing. Without any exaggeration, I have seen a number of black swans which could not be

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(75.) The river has a much longer course than was suspected for many years. It may be said to rise some distance to the east of Pingelly, and taking a northerly course flows through Beverley, York, Northam, and Newcastle, under the name of the Avon; from Toodyay it takes a westerly course, through the Darling Range, down to Guildford, etc.

(76.) This is a serious mistake by Fraser, as the English party visited the Swan River in March, 1827—not February, as stated. The summer ends in March, while the temperature in February is the hottest in the year. The exact dates are as follow:—January 17: H.M.S. "Success" sailed from Sydney, and on the 27th anchored in the Derwent, in Van Diemen's Land. February 8: Left the Derwent, and on March 5 arrived off Rottnest Island. March 8: The first gig and cutter entered the Swan River, which was examined by the 14th; and, after another day spent by the gig in exploring the Moreau (Canning River), the remainder of the time, to March 20, was employed in surveying the islands of Rottnest, Buâche, and Berthollet. March 21: Stood to sea, and after examining Géographe Bay and Cape Naturaliste, anchored at King George Sound on April 2. April 4: Stood to sea, with a strong breeze from the S.W., and at 10 p.m. on the 15th anchored at Port Jackson.

(77.) The black swan (*Chenopis atrata*) is not a true swan, but an allied form. It was first observed by Vlaming on January 5, 1697, when he named the river after them. It is not, however, exclusively confined to this part of Australia. These birds were nearly exterminated from the river, but having been obtained from other places are now again seen upon the waters of the Swan. Gould says:—"Our celebrated countryman and navigator, Cook, observed it on several parts of the coast. I may state that the black swan is generally distributed over the whole of the southern portion of Australia, the islands in Bass' Straits, and the still more southern country of Tasmania, wherever there are rivers, estuaries of the sea, lagoons, and pools of water of any extent. In some instances it occurs in such numbers that flocks of many hundreds may be seen together, particularly on those arms of the sea which after passing the beach-line of the coast expand into great sheets of shallow water, on which the birds are seldom disturbed either by the force of boisterous winds or the intrusions of the natives. In the white man, however, the black swan finds an enemy so deadly that in many parts, where it was formerly numerous, it has been almost, if not entirely, extirpated." Of pelicans, the only species found in the State (*Pelecanus conspicillatus*) is still to be seen on the river, while ducks frequent its reaches above Heirisson's Islands.

THE THREE GRACES OF LEONORA AND OTHER ABORIGINES OF THE EASTERN GOLDFIELDS.

estimated at less than 500 rise at once, exhibiting a spectacle which, if the size and color of the bird is taken into account, and the noise and rustling occasioned by the flapping of their wings previous to their rising, is quite unique in its kind. We frequently had from 12 to 15 of them in the boats, and the crews thought nothing of devouring eight roasted swans in a day.

"The animals are the same as in New South Wales—the kangaroo (78), emu, native dog, etc. Fish were abundant, and the Sound swarmed with tiger sharks (79).

"The few natives which we saw were not disposed to behave ill; on the contrary, they seemed much alarmed at first, but soon gained confidence. We gave them some black swans, which they eagerly accepted, and we dressed several of them in the old jackets of our marines. They had, indeed, a most ludicrous appearance, and seemed like men in shackles. It is worthy of remark that these savages have no means of navigation, and rather show a horror of the water. Their arms are the same as those of the natives of New South Wales, their clothing and appearance equally loathsome.

"The advantages which this country holds out to settlers above those in New South Wales—besides the important circumstance of its vicinity to India, the Spice Islands, Java, the Mauritius, and the Cape of Good Hope, and independent of its situation as a place of call for East India and China ships—are, in the first place: The great ease with which a settler can bring his land into cultivation, the forests averaging not more than eight to ten trees per acre;

(78.) Kangaroos, emus, etc., after nearly eighty years' occupation, have naturally been driven further afield, and are still plentiful in some parts of Western Australia. Fish, also, are abundant, although the grounds have been heavily worked by Greeks and Italians for some years past, while the river itself has been almost denuded of its finny inhabitants by the reprehensible allowance of net-fishing. Another factor is the use of trawls for prawn-catching, the constant dragging over the bottom destroying the ground piscine food and disturbing their breeding-grounds. Amended legislation for the preservation of food fishes is urgently needed.

(79.) Dr. Gunther says:—"The tiger shark (*Stegostoma tigrinum*) is one of the commonest and handsomest sharks of the Indian Ocean. The ground color is a brownish yellow, and the whole fish is ornamented with black or brown transverse bands or rounded spots. It is a littoral species, but adult specimens, which are from 10 to 15 feet long, are not rarely met far from land. It is easily recognised by its enormously long blade-like tail, which is half as long as the whole fish." At Sydney the carpet shark, or wobbegong (*Crossorhinus barbatus*), is often erroneously called the tiger shark; and, as the fish are still to be found at Rottnest, it is possible Fraser meant these, and not the true tiger shark of the Indian Ocean. The French also noted the very large number of sharks that hung round their ship off Rottnest in 1801. They are far less plentiful now.

Beagle Bay Natives Under the Care of Catholic Missionaries.

secondly, the facility with which he can bring his produce to market, either by land or water, the coast being easy of access on any part near the river, and no impediments (80) existing in the interior; thirdly, the great abundance of fresh water of the best quality, an advantage which New South Wales, east of the Blue Mountains, does not possess, excepting on the immediate banks of rivers and creeks; fourthly, the great abundance of limestone.

"Ten miles from the entrance of the Swan River, the Moreau of the French branches off to the south, according to the report of the party who went to explore it. It seems of equal extent with the Swan River, and the country on its banks is of the same description.

"The island of Berthollet, distant one mile from Buâche, is a barren inhospitable spot, producing abundance of hares, seals, and mutton birds. Its shores present many tesselated cliffs of limestone, resembling the turrets of a Gothic cathedral. There is no water on this island.

"The island of Buâche is composed principally of low ridges of light sandy loam, traversing the island from north to south, and terminating on the south with high cliffs or banks of sand, the loftiest parts of which are thickly covered with *Cypress (Calytris)*, and the surface, towards the sea, is considerably interrupted by limestone rocks. The soil, though light, appears to me—from the immense thickets of a species of *Solanum* (81) which it produces, and which attains the height of 10 feet—to be capable of producing any description of light garden crops. The interior of these ridges are singularly divided by transverse dykes or banks, forming deep pits, which receive all the water from the ridges, the dykes preventing its escape otherwise than by absorption. The pits are covered with gigantic *Solana*, and a beautiful species of *Brunonia*. Fresh water may be found on each of these islands by digging 2 feet deep. The north side of the island is in many places covered with extensive thickets of arborescent *Metrosideros*, and the soil I found to be of a very fine brown loam, studded with detached blocks of limestone, and susceptible of producing any description of crop. In one of these thickets we sowed various sorts of culinary seeds and introduced several plants of the banana.

(80.) This is not the fact. The sandy nature of the land is a serious impediment in the matter of roads for carriage of produce and goods, and road material in the country generally is absent where agricultural development is practical.

(81.) May be *Solanum simile.*

"The coast towards Point Cockburn is thickly studded with *Cypress*; the soil a light sand. Here we found abundance of fresh water on the beach, as well as in *Cypress* thickets beyond the influence of the sea My observations did not extend beyond Port Cockburn; but, from the appearance of the country, I doubt not its being of the same quality as that already described.

"Between the isles of Berthollet and Buâche is the entrance for ships drawing more than 16 feet of water into Port Cockburn (82). Vessels drawing less than 16 feet can run directly across the Sound, from the entrance of Swan River to Port Cockburn. Vessels of any burthen can proceed up the Sound to the entrance of the river, where there is good anchorage, with plenty of room to beat out should the wind come to blow hard from the north-west.

"It is remarkable that on the shores of the Sound, at the entrance to the river, there is not a perpendicular height of 5 feet from the line of low water to that of vegetation, a proof that there is never any heavy weather in the Sound. There is no surf, and boats may land on any part of the main. On the bar, at the entrance, there is only 1 fathom of water (83), but that is always smooth. Port Cockburn is only distant eight miles from it, where there is room for the largest fleet, with 7 fathoms of water within 20 yards of the shore, and this perfectly land-locked.

"Proceeding from the mouth of the river along Baie Géographe the appearance of the country is particularly pleasing.

"The shore seems well clothed with timber, and the foliage is of the richest green. The observations taken here confirm me in my opinion that the principal part of the timber consists of *Eucalyptus*. I saw no trace of *Banksia* or of *Casuarina*.

"From the shore the country is seen to rise gradually into gentle undulating hills, separated apparently by valleys of considerable size, the whole terminated by a magnificent range of hills, thickly covered with heavy timber extending all along the bay.

"At the head of the bay the feature of the country changes, exhibiting bold hills, with large masses of granite, in many instances jutting into the sea with considerable grandeur. The hills, too, are clear of timber, with the exception of some stunted *Eucalyptus*, and are divided by beautiful winding valleys, in each of which is a small

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(82.) Now called Rockingham.

(83.) At a heavy expense this bar has been removed, and a channel of 34 feet provided into the Port of Fremantle.

stream, and a soil of richest loam, throwing up immense quantities of herbaceous plants, amongst which I observed thistles (84) of 11 feet in height. I found the soil, on examination, to exceed 10 feet in depth. On digging the sand on the beach we found abundance of fresh water, while the soil with which the hills are covered is of the finest description to the very summit.

"At Cape Naturaliste the character of the soil continues without any visible change, but in the geological structure there is a very great difference. Here are immense cliffs, presenting at their base large beds of granite and schistose rock, passing alternately into each other, and observing in their dip an angle of 15deg. They were seen occasionally to enclose immense masses of pudding-stone, and an extraordinary aggregate containing petrifactions of bivalve shells and other marine productions, every part of which was covered with minute crystals of lime. Large masses of felspar were seen traversing these beds in various directions, and of various thickness. The granite rock was succeeded by a bed of micaceous schist, in an advanced stage of decomposition, over which were observed several caverns, which were found to contain rock-salt in crystallised masses in large quantities. The rock is decomposed pudding-stone, containing various sorts of granite, the salt having penetrated the most compact parts of the granite. The base of the cavern is a coarse sandstone, the whole covered with limestone. The southern extreme of the cape consists of lofty cliffs, presenting two ranges of superb caverns, the lowest of which we explored (85). The great or outer cavern is about 40 feet high at the entrance, 40 feet in breadth, and about 90 feet in depth. Into this cavern the sea rolls at high water, over immense blocks of granite, in awful grandeur. The stalactites in the cavern are many of them from 20 to 25 feet in length, covered with minute *Cryptogamic* vegetables of fantastic colors and form. The walls are clothed with the same substances, which give to the whole an extraordinary appearance. The second cavern is distinct from the first. The entrance is about 20 feet in height and 20 in breadth, increasing in height and breadth further in. The stalactites and stalagmites are abundant, and of the purest white. The former were observed to exceed 15 feet in length. There was a remarkable circumstance observed at the entrance of the cavern, the stalactites being all bent outwards, as if a gale of wind was perpetually

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(84.) At the locality referred to Riédlé, the chief gardener of the French fleet, in 1801, sowed vegetable seeds, and it is probable that here, as at the upper reach of the Swan, some thistle seeds were accidentally introduced.

(85.) Adjoining the marine caverns of Cape Naturaliste is a series of limestone caves, extending about 50 miles to the neighborhood of Cape Hamelin, which have been opened out by the Government. In some respects they rival, if not surpass, the Jenolan Caves of New South Wales.

blowing through the cavern. The three succeeding ones are of minor importance, but all containing stalactites.

"The appearance of the cliffs and caverns from the sea is exceedingly grand. It is impossible to pass along the beach 14 yards without crossing a stream which issues from caves of limestone, and which forms banks of shells, seaweed, stones, and whatever substances may come within their reach, incrusting them in a most beautiful manner.

"Such, indeed, were the attractions of the country that we all felt sorry on leaving it."

H.M.S. "Success,"

An Account of the Expedition of H M.S. "Success,"

Captain James Stirling, RN., from Sydney, to the Swan River, in 1827.

By Augustus H. Gilbert, Clerk of H.M.S. "Success."

H.M.S, "Success,"

Sydney, 30th April, 1827.

We sailed from Sydney on Wednesday, 17th January, having on board as passengers Mr. Fraser, Colonial Botanist, and Mr. Garling, of this place, in company with a cutter attached to the "Success" by the Governor, for the purpose of being employed in surveying the coast and to carry provisions to King George Sound, where an infant settlement has been formed, and which I shall speak of in the course of my letter. On the Friday following we parted company, finding she sailed so indifferently that we ran away from her under double-reefed topsails and top-gallant sails, while she had all sails crowded.

On Sunday we encountered a severe gale of wind, which, lasting only twenty hours, did us little or no injury, and from this time we had light winds, and nothing of any interest occurred till the 27th January, in the evening of which day we came to an anchor in the River Derwent, Hobart Town. The capital of Van Diemen's Land is situated about thirty miles from the entrance of this river, at the base of a lofty mountain. The next morning we weighed, and ran up to this town. The different views in passing up the river were most interesting. The little farms and fine ripe cornfields that adorned either side of this beautiful river reminded me strongly of England. The variety of tints the extensive forests afforded at that season of autumn, together with the romantic appearance of the

cloud-capped mountains, particularly the one under which the town is erected, gratified the taste of every lover of the works of Nature in the most ample manner.

The town is well planned, and is extensive, considering the short time that it has been in existence (about thirteen years), and appears to be rapidly increasing. This town possesses some natural advantages over Sydney, which renders it a more desirable place of residence; it is not subject to those sudden changes from heat to cold, and the soil is far superior and much deeper than at Sydney. All the necessaries of life are to be procured here in abundance, particularly vegetables, which flourish during the whole of the year. They have not erected a market place, which is an evil much complained of by the inhabitants, making the price of provisions, although abundant, excessively high, little or none being brought in from the country; there is one now, I believe, in contemplation, which will shortly be built. During our short stay we had many visitors, and we received several invitations, the inhabitants being much pleased with our arrival, and anxious to show us every attention. Among those who came on board was the son of one of the principal chiefs of New Zealand. He was brought on board by Captain Wilson, late of the Hon. East India Company's service, now a merchant of this place. This young chief had the misfortune to be wrecked in New South Wales, in one of Mr. Wilson's vessels, and only escaped with his life by being an excellent swimmer. He had an intelligent open countenance, and appeared quickly to comprehend the use of the different things on board on being explained to him. On the Wednesday following we went down the river to await the arrival of the cutter, and came to an anchor between Beanis Island and Pierson's Point, sixteen miles from the town. As there was now no probability of getting to the town, we went ashore at these places shooting, there being many kangaroos, quail, parrots, a beautiful species of pigeon, etc. We thus passed our time agreeably till the 8th February, when the cutter arrived, having experienced a heavy gale of wind for ten days. She had carried away her boom and gaff in two places, and was otherwise considerably damaged. Several head of stock, including two cows, which she had on board for King George Sound, died. We immediately sent the carpenter and sailmaker on board; and, having completed the necessary repairs by evening, we weighed and stood out to sea in company with her. We had a fine moderate breeze at first, but the next day it changed to a fresh beating breeze with occasional squalls. The cutter continued in company till the 13th, when, finding that she proved a great drawback to our progress, we hove to, and sent a boat on board with orders for her to make the best of her way to Swan River. If, however, she could not round Cape Leeuwin on the 15th March, on that day to bear up for King George Sound; and, if she could not reach that place by the 20th, to shape a course for Sydney. We now filled and made sail, and lost sight of her. On the 4th March we

weathered Cape Leeuwin, and on the 5th arrived off Rottnest Island, a place described by the French as being a terrestial paradise (1) but we found it a barren place, not possessing the slightest inducement for anyone to settle, the whole island being almost entirely composed of sand, covered with brushwood. There is a vast number of the small species of kangaroo on this island. The next day we sailed toward the Swan River, distant about ten miles, and came to an anchor, off the mouth of the river distant three miles. We sent a boat into the river, and on its return the crew gave us an unfavorable account of the entrance, there being a bar of sand and rocks, with scarcely sufficient water for a boat to pass over in safety, but immediately over this bar they got into deep water, having from 4 to 10 fathoms (2). They shot several black swans, a remarkable bird found in great numbers there. This bird is about the size of the white swan, and perfectly black, with the exception of the quill feathers at the tip of the wings, which are white. The bill, legs, and eyelids are red, and they fly in flocks. They are rather gross, but otherwise good eating. The next day (Wednesday) we proceeded to the island of Berthollet (Carnac), when we moored ship. This island is a mere mass of rock, intersected here and there with brushwood, the resort of sea birds, breeding here in vast numbers, every part of it being covered with holes similar to a rabbit warren. The next day (Thursday, March 8) being fixed for the expedition up the river, the first gig and cutter were ordered to hold themselves in readiness. At 8 o'clock they accordingly started from the ship, the boats being victualled for a fortnight and well armed. The object of this was to proceed, if possible, to the source of the river, to examine the banks, the depth of water, to fix on an eligible spot for a settlement, to ascertain the productions of the country, the nature of the soil, and the practicability of forming a harbor for shipping; and I am happy to state that our expectations are fully realised, and that our report has given so much satisfaction to the Governor that an immediate settlement is to be formed there. The boats proceeded about twenty (3) miles up the river the first day, when they were prevented going further by meeting with the flats, that here extended themselves the whole width of the river, and one and a-half (1½) miles in length. They were reduced to the necessity of taking everything out of the boats, and landing them on one of the many islands that are formed in this part of the river by the floods, and to drag the boats over by main force, there not being sufficient water to float the gig. In doing this the party were above their knees in mud, and obliged to walk over extensive beds of oyster shells, which lacerated their feet very much. The next day (Friday), however, they got the boats over and

(1) Rottnest Island was not called by the French a terrestial paradise, but a very correct description of the island which is diversified by hill, valley, and salt lakes, was given by them.

(2) Immediately over the bar the depth of water was about three or four fathoms, and this was followed by a number of sandbanks, some of which, near the railway bridge, still exist.

(3) Really twelve miles.

continued their course up the river. It is strange that immediately on getting over these flats they found deep water of nearly 8 fathoms. The river, after running two miles to the eastward, takes a N.N.E. serpentine direction. The scenery was delightful—the trees growing to the water's edge, the transparency of the river, the mountains and plains alternately appearing, and the picturesque points and bays, formed the most interesting scenery possible, and this place only requires a little assistance from art to render it one of the most delightful spots on earth. On Sunday they first observed the natives, two children were playing on the shore, who, immediately on perceiving the boat, ran off, but in a few minutes they could see about two hundred watching them from behind trees and the tops of the hills. We continued our course for some time without noticing them, and the natives kept moving along the shore with their spears in their hands, making signs for our people to come on shore. They having followed for some time, we put on shore, and all the natives on this retreated towards a hill near the spot except five rather elderly men, who immediately laid down their spears and made signs of friendship by holding their arms over their heads, etc. Mr. Belches, third lieutenant, went out to meet them, but upon another following him they showed strong symptoms of alarm, snatched up their spears, and would have fled had not the person instantly returned to the boat. By making signs of peace, and giving them some presents, they soon became more easy and familiar. They seemed particularly fond of bread and sugar, but they could not relish the salt meat. These people are about the middle size, possessing rather intelligent countenances than otherwise, and live in the most simple state possible; they walk upright, are small made, their thighs being no larger than the calf of a leg of a common-sized man; this may be owing to the small quantity of animal food they take, living chiefly on roots and berries, and their possessing no effective instruments for sporting, fishing, or hunting. They go in tribes of twenty or thirty, and each tribe has its chief (4), whom they obey and respect. They speak an uncouth and harsh language (5), and when they express either admiration, surprise, or pleasure they vociferate several times the word "Quabba." They have only these weapons, at least we only saw these amongst them—namely, the spear, knife, and tomahawk (6). The spear is formed of a species of reed that grows in abundance here. These spears are from 8 to 11 feet long, and they fasten a small piece of wood at the end of it to form a barb; this wood they sharpen with stones to a point, and secure it to the spear with the gut of the kangaroo, and strengthen it with the gum that is found here in large quantities. They throw them with great force and correct exactness. The tomahawk

(4) The aborigines of Australia have no chiefs in the proper sense of the term. Their most expert and powerful warriors are feared and obeyed, but can scarcely be said to govern.

(5) Some authorities consider the aboriginal dialects to be soft and mellifluous.

(6) In addition to these are others, notably the boomerang, womerah and nullah.

1. Natives Preparing for Corroboree at Broome.
2. Aboriginal Weapons Exhibited at Perth Museum.

Eucalyptus Calophylla, THE RED GUM OF WESTERN AUSTRALIA, ERRONEOUSLY CALLED *Angophora* BY FRASER.

is simply formed of a small piece of wood, about 18 inches long, with a stone at the end, fastened only by gum. The knife is also formed of stone, sharpened by others, but this is the meanest apology for a knife I ever saw. The natives are almost perfectly naked, having merely a band about 3 inches wide round their waists, made of the bark of a tree. The chiefs paint themselves with a sort of red clay, and twist their hair, which is long (7), round their heads, binding it with the feathers of the cockatoo and swan. The chiefs have likewise feathers through their ears, and a single quill feather through the septum of the nose (8). On Monday, March 12, we reached the source of the river, which latterly had become so narrow that we were obliged to boat the mast and pull, the trees overhanging on both sides so as to prevent our sailing. Here we encamped (9) for that and the following day, and passed our time in examining the country. We shot as many swans and ducks as we required, and Mr. Fraser made a large collection of various plants. On Wednesday, having got the things into the boat, we commenced our passage down the river. The boats had not proceeded far before both got staved from the large quantity of stumps of trees that had fallen into the river. We repaired this damage and reached the flats. The captain here ordered the first gig to proceed up another of the rivers (10) and ascertain the depth of water and how far it extended, but not to proceed further than to be enabled to be on board by sunset the following evening The cutter continued her course down the river, and reached the ship a little after midnight in safety. The gig returned the next night at 10 o'clock, having proceeded as far up the river as they could consistently with the order to be on board by sunset. It is worthy of remark that the whole way the gig went she had 5 fathoms water, and it was equally deep and broad at the place from which they commenced their return as at first, while the water was extremely salt. On the gig's returning down the river she fell in with another party of natives, who were more timid than those we had observed up the river. The boat was obliged to pull on and off the shore for some time, and make every token and sign of friendship before these natives could be prevailed on to remain while they landed. At last one or two remained, when one of our people landed and gave them some presents. They soon became more friendly. One of the boat's crew gave the chief a jacket, and another a pair of trousers, and it was strange to observe him endeavor to put it on as the other had put on his jacket, thrusting his arms through the places

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(7) The hair of the natives of Australia is short and curly as a general rule; in some instances the tail of the dingo has been introdueed and wound round the top of the head, which no doubt deceived the visitors.

(8) Usually a small bone of the kangaroo or a piece of wood is passed through the septum of the nose.

(9) This camp was at the junction of Ellen's Brook, named after Mrs. Stirling. There is a sketch of the camp at the Public Library, but the trees are not true.

(10) Canning River.

for his legs. It was curious, also, to observe the natives put their fingers and rub them on our people's skin, and then look to see if anything came off, being fully persuaded they were painted. The natives opened their waistcoats, and laughed much when they observed that their breasts were the same color as their hands and faces. Our people secured several spears from them and parted good friends. We were employed from this time in surveying the islands of Rottnest, Buâche, and Berthollet, with the adjacent rocks, and the coast on each side of the river. I had almost forgot that we made two gardens about fifteen miles (11) up the river, and another on Buâche, and sowed several descriptions of garden vegetables and corn. We left on Buâche a cow, three goats, and three sheep with young, etc.

Our expectations of the advantages of a settlement at Swan River are now fully confirmed, and although it would be impossible for vessels of above ten tons burden to enter the river at any state of the tide in safety, at the present entrance, it would be practicable at small expense to cut a canal at about four miles (12) from the mouth of the river to the sea. The distance necessary to be cut is only one quarter of a mile, and would immediately lead into water of 12 fathoms (13) both in the river and in the sea. The land is rocky (14), and would afford excellent sides to the canal. The climate is most delightful, the soil is good, and in many places exceedingly rich, and capable of producing any of the European vegetables and fruits as well as tropical.

The prevailing botany of this place, as I have collected from Mr. Fraser, consists of the following genera, viz. :—*Eucalyptus*, *Banksia*, *Dryandra*, *Casuarina*, *Leptospermum*, and a species of *Zamia*. The hills near the beach immediately north of the entrance are sandy, but on proceeding two hundred yards the soil changes to a rich red loam of very considerable depth (15), improving as the hills are ascended to the richest virgin loam, and capable of producing any crop. The hills continue of the same description for seven or eight miles, beyond which their character was not observed. The stony nature of these hills render them admirably adapted for the culture of the vine. The islands (16) on the flats are composed of a muddy deposit, evidently brought on by the floods; their banks are covered with thickets of *Casuarina* and *Metrosideros*, and their centres with sub

(11) Eleven or twelve miles.

(12) Two miles.

(13) The deepest water in Rocky Bay and for some distance on the sea coast is only four fathoms. The greatest depth in the Swan is seventy feet near the Chine in Freshwater Bay, and not very far from Blackwall Reach. Although the coast is known to be rising, it is incomprehensible to account for such considerable discrepancies, both in the given depths and the distances. In another direction also, Stirling figured the height of some hills and mountains absurdly. Mount William he called 3,000 feet, nearly double its known altitude.

(14) Rocky Bay. (15) Grossly exaggerated. (16) Heirisson's Islands.

View of Albany and King George the Third Sound.

marine succulent plants. At Point Fraser there is a material change observable in the botany ; a magnificent species of *Angophora* (17) is seen on the summit of the ranges; the *Casuarina* on the banks assume a more arborescent character than any seen hitherto on the river; *Banksia grandis*, forming a superb feature in the botany of this part, often exceeding 40 feet in height; the *Zamia* is seen attaining the height of 30 feet; its beautiful pinnated leaves, associated with the superb *Xanthorreas*, so abundant here, imparts to the forest an appearance perfectly tropical. Proceeding up the river, the country opens into immense plains of the most fertile description. The soil is a rich brown earth, extending to the base of the mountains. The forest land between the river and the ranges is covered with the most magnificent shrubs and stupendous *Angophora* (17), occupying the same situation in the geography of the botany of this country that the iron bark does on the Eastern coast. Stringy bark (18) was likewise seen on the ranges in considerable quantities.

From this time to the 20th we were employed in surveying the islands of Rottnest, Buâche, and Berthollet, but my limits will not allow me to give you any particulars respecting them. On the 21st of March we weighed and stood to leeward, steering towards Jurien Bay; but, the wind shifting, we bore up for Geographe Bay. On the 24th we made the bay, and as we sailed along the shore towards it we observed a party of about thirty natives on the beach. They likewise saw us, and seemed very anxious not to be left behind, and kept pace with the ship, although going five knots, till 2 o'clock, when we anchored in the bay, thus having walked at least thirty miles. They then seated themselves in a body at the base of a mountain, abreast the ship. We collected some presents, such as knives and pieces of stuff, handkerchiefs, beads, etc., and also some bread, sugar, etc., and sent them on shore. The natives seated themselves to await the boats approach, and on its arrival made every sign of friendship and invited our people on shore. We accordingly landed, and by distributing the presents and dancing completely won the savages' hearts. At last two chiefs ventured to come on board, and they were struck with astonishment at the size of the ship and the many different things they observed on board, more particularly the galley fire, at which they expressed the liveliest pleasure, vociferating, "Quabba, quabba!" After we had rigged them out in mariners' jackets, trousers, etc., we landed them, much gratified with their visit and in perfect amity with us.

We then shaped a course for King George Sound, and after having been beating for several days to windward off Cape Leeuwin we, on the 2nd of April, reached our destination, and came to an anchor off the entrance of Port Royal. The settlement consists of

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(17) Not *Angophora*, but *Eucalyptus calophylla*, the red gum of Western Australia.

(18) The jarrah, *Eucalyptus marginata*.

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about seventy persons, who landed there on the 25th December, 1826. They have erected several little cottages, or rather huts, made of wood and plastered with mud, but even in the commandant's house the wind blows through in every part. The expectations formed of King George Sound have by no means been realised; the soil is wretched, and with the utmost care and attention they have not hitherto been able to bring anything a few inches above the ground. The town is situated at the foot of an immense mountain. The harbor is excellent, and there is sufficient water for a three-decker up to the town. The people had only thirty days' provisions at half-allowance at the time we arrived, and it was thus fortunate that we touched there, for we found, to our surprise, that the cutter had not reached there. We had but a month's provisions remaining, and we had a voyage of upwards of two thousand miles to go before we could again be supplied, The captain, however, consented to give them all over a fortnight's provisions for the ship's company, and thus supplied them for two months at the same allowance. The day after the people arrived here, from some misunderstanding, the natives attacked a party of six or seven men, who had strayed a short distance from the spot they had fixed on for forming their town, and obliged the party to make off with all speed back again. One man was severely wounded, being speared through the thigh and the back. Another spear was sent through the fleshy part of the arm, which entered his side, thus pinning his arm to his side. In this condition he managed to reach his companions. He still exists, but is entirely maimed for life. We brought him to Sydney. The natives are in other respects perfectly harmless; they have ingress and egress to any of the huts, and never attempted to take anything unless given to them. They appear to be very ill-used by the sealers, who frequent this part of the coast, by forcibly taking their women away, and shooting them for the slightest offences. Just before our arrival the commandant had caused seven sealers to be apprehended for taking four natives to Michaelmas Island (a small barren rock in the Sound), killing one, and leaving the others there with the evident intention of starving, and for violently taking two of their women away and landing them on some part of the mainland directly away from the tribe they belonged to. They are to be tried for murder the first opportunity that offers to bring them to Sydney. Here, as well as at Swan River, they are naked, with the exception of a seal or kangaroo skin, which they throw over their shoulders and which reaches no lower than their waist. There is no other apparent difference between them.

The scenery as we entered the Sound was bold and magnificent. The lofty mountains in various shapes, the curiously-formed islands, and the sea breaking violently on the rocks, give it a most striking effect; but there is, at the same time, a barren appearance in the landscape that soon fatigues the eye of the spectator.

I had procured some specimens of a most curious plant that flourishes in this part of the globe only. It is called the pitcher-plant, and grows in the marshy ground here; it consists of thin stalks about 2 feet high, which produce at the top small wild flowers, similar to the lily in form, only much smaller and possessing no smell. On the stalk, just above the soil, grow several (three to seven) small bulbous flowers, shaped similar to a pitcher, with a cover or top to them. When there is rain, or heavy dew, these covers lift up, and receive all the moisture that falls into them; on its leaving off raining, the covers shut down, and thus prevent the water escaping. The pitchers thus contain sufficient to supply the plant with nourishment the whole of the dry season, each pitcher containing from one to three spoonsful of water.

On the 4th of April we stood to sea, with a strong breeze from the S.W., and at 10 p.m. on the 15th we anchored within the heads of Port Jackson, and found that the cutter had reached this place a week before us, having, while off King George Sound, carried away her rudder in a gale of wind, which obliged her to bear up.

On the (19) King's Birthday (April 23) the Governor (20) gave a splendid ball and supper, to which we were all invited, but I have no room left for particulars.

On Saturday, the 28th of April, the first regatta witnessed took place. It was got up on board us by Captain Stirling and Captain Ross, of the "Rainbow," and on that day we had all the beauty and flower of Sydney on board, together with the 57th Band, and between the races quadrilles were the order of the day. Captain Ross' boat won the pulling match, and our cutter the sailing. Captain Stirling gave an excellent cold collation, and the party did not break up till late in the evening. The river (21) presented one of the gayest scenes possible, and everyhody was delighted.

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(19) George IV. was born August 12, 1762, but on his accession to the throne, in 1820, directed St. George's Day to be observed as his birthday.

(20) General Sir Ralph Darling.

(21) Parramatta River.

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